

If this passes, this will violate the FCC Rules by causing harmful interference to other services (astronomy, amateur radio, military, etc.), thereby possibly rendering other, necessary communications impossible. From the a study posted on the ARRL: "Interference measurements in HF and UHF bands caused by extension of power line communication bandwidth for astronomical purpose

Internet: <http://www.qsl.net/jh5esm/PLC/isplc2003/isplc2003a7-1.pdf>

Summary: Power line communication (PLC) system which extends the available frequency bandwidth up to 30 MHz has been proposed in Japan. The electromagnetic interference problems on PLC had been investigated by the PLC study group organized by the Ministry of Public Management Home Affairs, Post and Telecommunications (MPHPT). The study group held collaborated field experiments of the PLC facility and we measured interferences caused by the PLC facility in the HF and UHF bands in order to evaluate the influences of the expansion of PLC bandwidth on radio astronomical observations. In the field experiment, two sets of PLC modems (SS and OFDM) were tested as an access system. During the PLC modems were on, the HF spectra observed showed strong increase of the noise-floor level, and it was found that the PLC noise exceeded the level of galactic noise by more than 30 dB. In UHF band, spurious emission around 327 MHz was identified. In both HF and UHF band, the interferences exceeded the limit of harmful interference level for radiop astronomical observation which is given in Recommendation ITU-R TA769-1. Safety distances where the Recommendation was satisfied are estimated to be 219 km and 12 km at 9.2 MHz and 327 MHz, respectively. PLC seems to be a harmful interference source for the radio astronomical observation in both HF and UHF bands.

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Sharing studies between the radio astronomy telescopes and the power line communication systems in the HF region

Internet: <http://www.qsl.net/jh5esm/PLC/isplc2003/isplc2003a7-4.pdf>

Summary: Radio Astronomy has frequency allocations in 13.36-13.41 MHz and 25.55-25.67 MHz on a primary basis worldwide. These bands are extensively used by radio astronomers to observe electromagnetic waves emitted by the Sun, the Jupiter and other large, gaseous planets in the solar system. The powers from a single PLC system in the above radio astronomy bands are --33 dBW and --29.2 dBW respectively and therefore the PLC sytems seem to be a harmful interference source for the radio astronomical observation in the HF band. It is necessary to keep an adequate separation distance to avoid harmful inteference to the radio astronomy telescope, and we calculated the separation distance based on the free-propagation method. We obtained a value of 424 km. If the PLC system is widely deployed, it is sure that the interference level increase greatly and the separation distance will become much larger. Thus it was recognized that it is quite difficult to share frequencies with the PLC systems and radio astronomy telescopes, at least, in Japan, and that a new technology to dramatically reduce leaked emissions from the power lines are crucial for the PLC systems to coexist with other

radiocommunications services.

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more studies can be found here:

<http://www.arrl.org/tis/info/HTML/plc/>